AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. (original):   A CDMA receiving apparatus comprising:

a searcher section which has a protection path memory, generates a delay profile from a

reception signal, finds peaks from said delay profile based on a variable peak level reference

threshold value and a variable noise level reference threshold value which are determined based

on said delay profile, reads out protection path data in a previous cycle from said protection path

memory, and determines timings of valid paths based on timing of said found peaks and

protection path timings of the read out protection path data;

a finger section which detects a signal from said reception signal for every path in

response to said valid path timings;

a RAKE synthesizing section which carries out RAKE synthesis to the detected signals to

produce a RAKE synthesis signal; and

a decoding section which decodes said RAKE synthesis signal.

2. (original):   The CDMA receiving apparatus according to claim 1, wherein said

searcher section variably determines said variable peak level reference threshold value and said

variable noise level reference threshold value based on a maximum peak level and a noise level

in said delay profile.

3. (original): The CDMA receiving apparatus according to claim 2, wherein said searcher section has a threshold value memory storing a maximum peak level threshold value and a noise level threshold value, and

said searcher section calculates a level difference between said maximum peak level and said noise level in said delay profile, and reads out said maximum peak level threshold value and said noise level threshold value from said threshold value memory based on said level difference, and determines said variable peak level reference threshold value and said variable noise level reference threshold value based on said maximum peak level and said noise level in said delay profile and said maximum peak level threshold value and said noise level threshold value.

4. (original): The CDMA receiving apparatus according to claim 3, wherein said searcher section determines said variable peak level reference threshold value by subtracting said maximum peak level threshold value from said maximum peak level, and said variable noise level reference threshold value by adding said noise level threshold value to said noise level.

5. (original): The CDMA receiving apparatus according to claim 3, wherein said maximum peak level threshold value has a larger value when said level difference is lager and said noise level threshold value has a smaller value when said level difference is smaller.

6. (original): The CDMA receiving apparatus according to claim 1, wherein said searcher section finds said peaks from said delay profile based on said variable peak level

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reference threshold value and said variable noise level reference threshold value which are

determined based on said protection path data in addition to said delay profile.

7. (original): The CDMA receiving apparatus according to claim 6, wherein said

searcher section variably determines said variable peak level reference threshold value and said

variable noise level reference threshold value based on a maximum peak level for said valid

paths indicated by said protection path data and a noise level in said delay profile.

8. (original): The CDMA receiving apparatus according to claim 7, wherein said

searcher section has a threshold value memory storing a maximum peak level threshold value

and a noise level threshold value, and

said searcher section calculates a level difference between said maximum peak level and

said noise level in said delay profile, and reads out said maximum peak level threshold value and

said noise level threshold value from said threshold value memory based on said level difference,

and determines said variable peak level reference threshold value and said variable noise level

reference threshold value based on said maximum peak level and said noise level in said delay

profile and said maximum peak level threshold value and said noise level threshold value.

9. (original): The CDMA receiving apparatus according to claim 8, wherein said

searcher section determines said variable peak level reference threshold value by subtracting said

maximum peak level threshold value from said maximum peak level, and said variable noise

level reference threshold value by adding said noise level threshold value to said noise level.

10. (original): The CDMA receiving apparatus according to claim 8, wherein said

maximum peak level threshold value has a larger value when said level difference is lager and

said noise level threshold value has a smaller value when said level difference is smaller.

11. (original): The CDMA receiving apparatus according to claim 1, wherein said

searcher section variably determines said variable peak level reference threshold value and said

variable noise level reference threshold value based on a time average of peak levels of said valid

paths indicated by said protection path data and a time average of noise levels in place of said

maximum peak level and said noise level in said delay profile.

12. (original): The CDMA receiving apparatus according to claim 11, wherein said

searcher section has a threshold value memory storing a maximum peak level threshold value

and a noise level threshold value, and

said searcher section calculates a level difference between said peak level time average

and said noise level time average, and reads out said maximum peak level threshold value and

said noise level threshold value from said threshold value memory based on said level difference,

and determines said variable peak level reference threshold value and said variable noise level

reference threshold value based on said maximum peak level and said noise level in said delay

profile and said maximum peak level threshold value and said noise level threshold value.

13. (original): The CDMA receiving apparatus according to claim 12, wherein said

searcher section determines said variable peak level reference threshold value by subtracting said

maximum peak level threshold value from said maximum peak level, and said variable noise

level reference threshold value by adding said noise level threshold value to said noise level.

14. (original): The CDMA receiving apparatus according to claim 12, wherein said

maximum peak level threshold value has a larger value when said level difference is lager and

said noise level threshold value has a smaller value when said level difference is smaller.

15. (original): A method of determining path timings in a CDMA receiving apparatus

comprising the steps of:

(a) generating a delay profile from a reception signal;

(b) finding peaks from said delay profile based on a variable peak level reference

threshold value and a variable noise level reference threshold value which are determined based

on said delay profile;

(c) reads out protection path data in a previous cycle from said protection path memory;

and

(d) determining timings of valid paths based on timing of said found peaks and protection

path timings of the read out protection path data.

16. (original): The method according to claim 15, wherein said (b) step comprises the

step of:

(e) variably determining said variable peak level reference threshold value and said

variable noise level reference threshold value based on a maximum peak level and a noise level

in said delay profile.

17. (original): The method according to claim 16, wherein

said (e) step comprises the steps of:

(f) calculating a level difference between said maximum peak level and said noise level

in said delay profile;

(g) reading out a maximum peak level threshold value and a noise level threshold value

from a threshold value memory based on said level difference, said threshold value memory

storing said maximum peak level threshold value and said noise level threshold value; and

(h) determines said variable peak level reference threshold value and said variable noise

level reference threshold value based on said maximum peak level and said noise level in said

delay profile and said maximum peak level threshold value and said noise level threshold value.

18. (original): The method according to claim 17, wherein said (h) step comprises the step of:

(i) determining said variable peak level reference threshold value by subtracting said maximum peak level threshold value from said maximum peak level, and said variable noise level reference threshold value by adding said noise level threshold value to said noise level.

19. (original): The method according to claim 17, wherein said maximum peak level threshold value has a larger value when said level difference is lager and said noise level threshold value has a smaller value when said level difference is smaller.

20. (original): The method according to claim 15, wherein said (b) step comprises the step of:

(j) finding peaks from said delay profile based on a variable peak level reference threshold value and a variable noise level reference threshold value which are determined based on said protection path data in addition to said delay profile.

21. (original): The method according to claim 20, wherein said (j) step comprises the step of:

variably determining said variable peak level reference threshold value and said variable noise level reference threshold value based on a maximum peak level for said valid paths indicated by said protection path data and a noise level in said delay profile.

22. (original): The method according to claim 15, wherein said (b) step comprises the

step of:

(k) variably determining said variable peak level reference threshold value and said

variable noise level reference threshold value based on a time average of peak levels of said valid

paths indicated by said protection path data and a time average of noise levels in place of said

maximum peak level and said noise level in said delay profile.

23. (currently amended): A CDMA receiving apparatus comprising:

a reference threshold value calculating section which calculates a threshold value;

a determining section which selects ~~ones more than the threshold value~~<u>one or more paths</u>

<u>having peak greater than the threshold value</u> calculated by said reference threshold value

calculating section from among a plurality of paths;

a protection processing section which determines a valid path from the paths selected by

said determining section and indicates a timing of the valid path;

a finger section which detects said valid path using the timing of the valid path indicated

by said protection processing section;

a RAKE synthesizing section which adds a level of the valid path detected by said finger

section; and

a level difference calculating section which calculates a level difference between a

maximum peak level of the<u> valid</u> path and a noise level, and

wherein said reference threshold value calculating section calculates said threshold value

in accordance with said level difference.

24. (currently amended): A CDMA receiving apparatus comprising:

a reference threshold value calculating section which calculates a threshold value;

a determining section which selects a path ~~more than said threshold value~~ having peak

greater than the threshold value calculated by said reference threshold value calculating section

from among a plurality of path;

a protection processing section which determines a valid path from the paths which are

selected by said determining section and indicates a timing of a valid path;

a finger section which detects said valid path using the timing of said valid path indicated

by said protection processing section;

a RAKE synthesizing section which adds a level of said valid path which is detected by

said finger section; and

a level difference calculating section which calculates a level difference between a

maximum peak level of said valid path and a noise level, and

wherein said reference threshold value calculating section calculates said threshold value

in accordance with said level difference.